



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Eastern Hog-nosed Snake *Heterodon platirhinos*

State Status: **None**
Federal Status: **None**

SPECIES DESCRIPTION: The Eastern Hog-nosed Snake is a thick-bodied, moderately large snake with a broad head and upturned snout. Although variable in appearance, most specimens are well patterned with a light background color of yellow, gray, or olive and a regular series of large, rectangular, dark spots down the middle of the back that alternate with dark spots on either side. The species also commonly displays partial or complete melanism; specimens so pigmented from New England appear slate black, rather than jet black. The scales are keeled and the underside of the tail is typically lighter than the rest of the belly. Adults range from approximately 51 to 102+ cm (20 to 40+ in.) in total length. Mating usually takes place in the spring, and females typically deposit 15 to 25 eggs in sandy soil or mulch in June or July. Eggs hatch in August and September.

Behaviorally, the species is often easy to distinguish from all other native snakes because it hisses loudly, flares its neck like a cobra, and inflates its body substantially when threatened (hence the vernacular name, “puff adder”). If further pressed, some specimens will thrash and roll on their backs, eject their stomach contents, and “play dead.”

DISTRIBUTION AND ABUNDANCE: The species is not well documented in Massachusetts, in part because it appears to be a naturally “low density” animal throughout much of its range. Most specimens in collections are from coastal areas south of Boston, and in particular from Cape Cod, but based on a handful of documented occurrences and considerable anecdotal material, it likely occurs in all counties **except** Dukes and Nantucket, and possibly Berkshire and Franklin, and may have been extirpated from Essex and Middlesex. It is still locally common at least in portions of Barnstable, Worcester and Plymouth counties.

HABITAT DESCRIPTION: This species is most closely associated with pitch pine barrens, but is also found in other forested and open habitats with well drained, sandy, glacial outwash soils. It is often found around the margins of wetlands within these dry habitats. This is not surprising

since Eastern Hog-nosed Snakes appear to require an abundance of toads to sustain the adult segment of their populations, and an abundance of small amphibians (in New England probably Northern Spring Peepers (*Pseudacris c. crucifer*) and/or Red-backed Salamanders (*Plethodon cinereus*)) to sustain hatchlings and sub-adults. There is at least one Worcester County site where the species shares a rock pile hibernaculum with a large population of North American Racers (*Coluber constrictor*), and it is possible the species may require similar hibernaculum habitat at least within some areas of its range within the state.

THREATS: The major threats to this species — and most medium-to-large snakes in general — are ever increasing habitat loss and road mortality. For this species, habitat loss may include the loss of wetland/lowland habitats it does not require directly, but which are crucial for the reproduction of its prey species. There have undoubtedly been losses of hibernacula to development, but it is unknown how crucial such habitats may be to the species in this part of its range. Some populations may also have been reduced by over-collection, and certainly many individuals are killed by people needlessly frightened by their extraordinary bluff behavior. It is unknown if the unnaturally high density populations of “human commensals,” such as raccoon, skunk and fox, created by development are also a threat to this snake. Studies are required to determine more about the abundance, distribution, and core habitat requirements of the species.

REFERENCE:

Klemens, M. W. 1993. *Amphibians and Reptiles of Connecticut and Adjacent Regions*. State Geological and Natural History Survey of Connecticut, Bulletin 112. Connecticut Dept. Environmental Protection, Hartford, Connecticut.

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A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

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